

REMARKSStatus of Claims

Claims 3-4 are pending. Claims 5-8 have been withdrawn without prejudice. Claim 3 has been amended to correct minor informalities in claim language.

Favorable reconsideration of the application in light of the following comments is respectfully solicited.

Claim Rejection - 35 U.S.C. § 103

Claims 3-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Oishi et al. (USP 4,943,497) in view of Yamashita et al. (USP 6,387,564) and in view of Hosoya et al. (US 2004/0076882). This rejection is traversed for at least the following reasons.

Regarding claim 3, the Examiner asserts that Oishi discloses $\text{Li}_x\text{Ni}_{1-y}\text{Co}_{1-y}\text{O}_2$ where $0.2 \leq x \leq 1$ and $0 < y < 0.5$, and LiMnO_2 , and that Yamashita discloses $\text{Li}_x\text{Ni}_{1-y}\text{O}_2$ or $\text{Li}_x\text{Co}_y\text{Ni}_{1-y}\text{O}_2$ where $0 < x \leq 1.1$ and $0 \leq y \leq 1$ as the first active material. However, Applicants respectfully submit that the claimed amount of Li (i.e., x) is $0.9 \leq x \leq 0.98$, and this range is critical which exhibits the unexpected results as shown in Table 1 of the specification (see, page 10, line 22 – page 11, line 3 and Table 1 of the present application). A designed capacity of the battery decreases substantially in proportion to a decrease in the theoretical capacity of the positive electrode if the x value is less than 0.9. If the x value exceeds 0.98, on the contrary, an irreversible capacity of the positive electrode decreases, and the battery comes to its discharge-end voltage due to a rise in voltage potential of the negative electrode. This impairs the effect of voltage control using the discharge voltage of the positive electrode, thereby causing the battery to heat up at the end of electric discharge (see, page 10 line 23 to page 11, line 3 and Table 1, specifically comparison

example 3, of the present application). As such, it is clear that the claimed range of $0.9 \leq x \leq 0.98$ is critical and can exhibit the unexpected results as set forth above. In this regard, Applicants respectfully note that in the Office Action dated April 28, 2009, the Examiner conceded that limiting the amount of Li to $0.9 \leq x \leq 0.98$ is critical to the properties of the battery (see, Response to Argument section at pages 5-6 of the Office Action dated April 28, 2009).

Based on the foregoing, since Applicants have shown the criticality of the claimed range of the Li amount, the *prima facie* case of obviousness based on overlapping ranges based on Oishi and Yamashita has been overcome (see, M.P.E.P. § 2144.05, III). Accordingly, claim 3 is patentable over the cited references. Since claim 4 depends upon claim 3, claim 4 is also patentable for at least the same reasons as claim 3. Thus, it is requested that the Examiner withdraw the rejection of claims 3 and 4 under 35 U.S.C. § 103(a).

Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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